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(54) **INVERSION-OF-CONTROL COMPONENT SERVICE MODELS FOR VIRTUAL ENVIRONMENTS**

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(57) **ABSTRACT**

In the field of computing, many scenarios involve the execution of an application within a virtual environment of a device (e.g., web applications executing within a web browser). Interactions between applications and device components are often enabled through hardware abstractions or component application programming interfaces (API), but such interactions may provide more limited and/or inconsistent access to component capabilities for virtually executing applications than for native applications. Instead, the device may provide hardware interaction as a service to the virtual environment utilizing a callback model, wherein applications within the virtual environment initiate component request specifying a callback, and the device initiates the component requests with the components and invokes associated callbacks upon completion of a component request. This model may enable the applications to interact with the full capability set of the components, and may reduce blocked execution of the application within the virtual application in furtherance of application performance.